26th International Precious Metal Institute Conference June 15-18, 2002, Miami, Florida

Dr Masatake Haruta being congratulated on his award by Dr David Thompson

The 26th International Precious Metals Institute (IPMI) Conference brought together approximately 340 delegates from around the world involved in all aspects of the precious metals industry. The conference programme was structured so that papers were presented in 6 key Sessions: 'New Business Trends', 'Recycling and Recovery Technology', 'Processes for Recovery and Refining of Precious Metals', 'Advances in Precious Metals Analysis and Methods', 'Precious Metal Mining Refining and Plant Operations', and finally 'New Applications and Usage of Precious Metals'.

The later session which focused on applications was of particular interest to *Gold Bulletin* readers, with two of the six papers presented by the World Gold Council. In his talk '*Trends in the Use of Gold in Existing Applications*' Richard Holliday described the wide range of uses of gold in electronics including bonding wires, electroplated contacts and connectors, metallisations, thick film pastes and solder alloys, as well as the range of currently used gold based dental alloys. The factors likely to affect future gold use in these sectors were discussed. These include a recent trend away from palladium based dental alloys to gold dental alloys, the introduction of new technology in the electronics industry and, in Europe in particular, the future requirement that waste electrical and electronic equipment will have to be recycled. The techno-economic case for using gold in preference to competing materials in certain applications was discussed and the overall long-term effect on industrial gold offtake was considered to be positive.

In the following talk '*Developing New Industrial Applications for Gold*', David Thompson highlighted the commercially important reactions catalysed by gold including water gas shift, carbon monoxide oxidation, selective hydrogenation and NOx reduction. The unique features of gold catalysts and latest developments in this rapidly developing field were discussed. World Gold Council and European Union projects considered to underpin the potential future use of gold catalysts in industrial applications including fuel cells, pollution control and chemical processing were presented. This presentation also discussed exciting new applications for gold in other aspects of nanotechnology, electronics, and medicine, and reviewed the Council's GROW Programme, which is providing short-term support to selected research, development and feasibility projects in these areas. A version of this paper will appear in a subsequent edition of *Gold Bulletin*.

The 2002 IPMI Henry J Albert Award was presented at the conference. Sponsored by Engelhard Industries, this award recognises outstanding theoretical and experimental contributions to the science of precious metals. This year's award was presented to Dr Masatake Haruta, Director at the Research Institute for Green Technology, National Institute of Advanced Industrial Science and Technology in Tsukuba, Japan, for his pioneering work on gold catalysis. Whilst at the Osaka National Research Institute (ONRI) in 1987, Dr Haruta discovered the very high catalytic activity of gold dispersed on oxide surfaces for oxidation of carbon monoxide. Since then more than 40 papers have been published by his group on gold catalysis, focused on the high activity of gold nanoparticles. According to IPMI, what he has done is 'to demonstrate repeatedly and convincingly that gold, when properly used was an effective catalyst for new applications'.

Later in the conference a panel discussion on the 'Future of gold fabrication demand' took place, which was full of lively, topical debate. Full details of the IPMI Conference proceedings can be obtained by contacting IPMI at mail@ipmi.org.

Richard Holliday
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